

# **2002 Priority Setting for Standards and Test Procedure Rulemakings**

Draft  
August 30, 2001

## **FISCAL 2002 PRIORITY SETTING FOR THE APPLIANCE STANDARDS RULEMAKING PROCESS**

The enclosed data sheets reflect the priorities proposed for Fiscal Year 2002 by the Department of Energy, Office of Building Research and Standards. The Office requests comments on the data sheets and the proposed priorities and schedules. These proposed priorities are based on the presumption that the Lighting and Appliance Standards Program will be funded at its requested level for the fiscal year 2002. Final priorities will be based on the Department's consideration of comments received and funds available. Once rulemakings are completed low priority actions will be added to the high/medium priority lists.

Written comments should be submitted by October 11, 2001, to the U.S. Department of Energy, 1000 Independence Ave., SW, Washington, D.C. 20585-0121, Attn: Michael Raymond, EE-41, or by e-mail at [Michael.Raymond@ee.doe.gov](mailto:Michael.Raymond@ee.doe.gov). If you have any questions, please contact Michael Raymond at (202) 586-9611.

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<sup>1</sup> Drops to Low Priority upon completion

\* Final Rules for these products have been recently published.

## Summary of Priorities

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### Test Procedures

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<sup>1</sup> Drops to Low Priority upon Completion

\* Final Rules for these products have been recently published.

## Standards

**Product:** Air-Cooled Central Air Conditioners and Air-Source Heat Pumps, 65-240 kBtu

**Priority:** High

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2005-2030</b>	0.50 – 4.71 <sup>1</sup> (in addition to savings due to ASHRAE Standard 90.1-1999)
<b>Potential Economic Benefits/Burdens</b>	0.4 (estimated NPV, billions of \$1998)
<b>Potential Environmental or Energy Security Benefits</b>	Carbon emissions reduction – est. 7 million tons.
<b>Status of Required Changes to Test Procedures</b>	DOE plans to publish Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR by September 2001. See page 8.
<b>Other Regulatory Actions</b>	Possible State and regional environmental regulation (e.g. air quality).
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	None known.
<b>Issues</b>	Revised ASHRAE 90.1 standards approved 6/99, which would save an estimated 2.2 quads from 2001-2030. DOE will consider higher standards for additional energy savings.
<b>FY 2001 Priority</b>	High

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE plans to initiate rulemaking in FY 2001.
<b>Rationale for Priority Level</b>	Energy savings are significant.

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<sup>1</sup> Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

## Standards

**Product:** Central Air Conditioners and Heat Pumps, 3 phase, <65 kBtu

**Priority:** Medium

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	1.29 – 4.09 <sup>2</sup>
Potential Economic Benefits/Burdens	1.7 (estimated NPV, billions of \$1998)
Potential Environmental or Energy Security Benefits	Carbon emissions reduction – est. 25 million tons.
Status of Required Changes to Test Procedures	DOE plans to publish Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR by September 2001. See page 8.
Other Regulatory Actions	Possible State and regional environmental regulation (e.g. air quality).
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved 6/99. Efficiencies of these products were left unchanged. Single-phase products are regulated by NAECA, and it is desirable to have the same standards for single and three phase versions. A DOE rulemaking is in progress for single phase products.
FY 2001 Priority	Medium

### Proposed Schedule and Rationale

Proposed Schedule	DOE plans to initiate rulemaking when rulemaking for residential (single phase) products is completed.
Rationale for Priority Level	Energy savings are significant.

<sup>2</sup> Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

## Standards

**Product:** Clothes Dryers - (Gas/Electric)

**Priority:** Low

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads)</b>	0 - 4.3 <sup>3</sup>
<b>Potential Economic Benefits/Burdens</b>	Not available
<b>Potential Environmental or Energy Security Benefits</b>	Not available
<b>Status of Required Changes to Test Procedures</b>	Reduced annual cycles needs to be considered, definitions and creation of new product class for condensing dryers.
<b>Other Regulatory Actions</b>	DOE regulation of clothes washers. DOE regulation of white goods for full line manufacturers.
<b>Recommendations by Interested Parties</b>	There appears to be a general consensus among stakeholders that updating clothes dryer standards should be given low priority.
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	At least three U.S. manufacturers are marketing high efficiency clothes washers, which are likely to have improved moisture extraction.
<b>Issues</b>	Significant dryer savings potential will be considered in clothes washer rulemaking (greater moisture extraction). Mechanical extraction has been estimated to be 20 times more cost effective than thermal extraction.
<b>FY 2001 Priority</b>	Low

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
<b>Rationale for Priority Level</b>	Interested Parties believe this is a low priority product. Other DOE standards will impose cumulative burden on white goods manufacturers.

<sup>3</sup> Based on DOE preliminary analysis, June 2001

## **Test Procedure**

**Product:** Clothes Dryers - (Gas/Electric)

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needs to be changed for standard
Priority of Standard	Low
International or Other Coordinating Activities	CSA has conducted specialized dryer tests and has asked DOE to consider revisions to the test procedure.
Recommendation by Interested Parties	
Statutory Deadline	
Issues	A new product class needs to be defined for condenser dryers. Currently there is one waiver in effect. There are numerous changes that are required prior to a standards rulemaking for clothes dryers.

### **Proposed Schedule and Rationale:**

Proposed Schedule	
Rationale for Priority Level	Considered to be a low priority by stakeholders.



## Standards

**Product:** Clothes Washers

**Priority:** Low

Factors for Priority Setting		Assessment				
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2004-2030	Total range considered: [0.28 - 7.70] Specific examples below:					
	Efficiency Improvement over the Base Case (MEF)					
	5% (0.860)	10% (0.908)	15% (0.961)	20% (1.021)	25% (1.089)	
	0.28 - 0.28	0.93 - 0.94	1.74 - 1.76	2.13 - 2.15	4.06- 4.08	
	35% (1.257)	40% (1.362)	45% (1.485)	50% (1.634)		
	5.94 - 6.09	5.98 - 6.13	6.98 - 7.28	7.36 - 7.70		
The Final Rule energy savings was 5.5 quads over 2004-2030.						
Potential Economic Benefits/Burdens	The Net Present Value (NPV) is \$15.3 billion cumulative from 2004 to 2030 in 1997 dollars.					
Potential Environmental or Energy Security Benefits	For period 2004- 2030, 95 million metric tons of carbon and 254 thousand metric tons of NO <sub>x</sub> .					
Status of Required Changes to Test Procedures	Final Rule issued January 12, 2001. Changes to the test procedure were incorporated into the standards rulemaking.					
Other Regulatory Actions	DOE regulation of clothes dryers. DOE regulation of white goods for full line manufacturers.					
Recommendations by Interested Parties						
Evidence of Market-Driven or Voluntary Efficiency Improvements	Consortium for Energy Efficiency program with utilities. Energy Star program. Federal Energy Management Program for procurement initiative. At least three U.S. manufacturers are marketing high efficient clothes washers.					
Issues						
FY 2001 Priority	High					

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	ANOPR - Published 11/19/98 NOPR - 7/00 Final Rule - 01/01
<b>Rationale for Priority Level</b>	Final Rule published 1/12/2001

## Test Procedure

**Product:** Clothes Washers

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure was changed as part of the standards rulemaking.  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### Proposed Schedule and Rationale:

<b>Proposed Schedule</b>	Published as part of standards rulemaking. NOPR - 7/00. Final Rule 01/01.
<b>Rationale for Priority Level</b>	Test procedure was revised recently to implement the standards rulemaking.

## Standards

**Product:** Commercial Air Conditioners & Heat Pumps (All products for which DOE proposes to accept ASHRAE 90.1-1999 levels)

**Priority:** Low

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030</b>	2.9 <sup>4</sup> (ASHRAE Standard 90.1-1999)
<b>Potential Economic Benefits/Burdens</b>	Not available.
<b>Potential Environmental or Energy Security Benefits</b>	Specific estimates of emission reductions have not been developed however, energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
<b>Status of Required Changes to Test Procedures</b>	DOE plans to publish Final Rules to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR by September 2001.
<b>Other Regulatory Actions</b>	EPA phase out of HCFC refrigerants.
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	None known.
<b>Issues</b>	Revised ASHRAE 90.1 standards approved 6/99.
<b>FY 2001 Priority</b>	High

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	Notice of Availability 5/00. Final Rule published 01/12/2001.
<b>Rationale for Priority Level</b>	Standards set by EPACT were amended to adopt revised ASHRAE 90.1. No further action.

<sup>4</sup> Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

## **Test Procedure**

**Product:** Commercial Air Conditioners & Heat Pumps (DOE accepts ASHRAE 90.1-1999 test procedures for all commercial a/c products.)

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Standards set by EPACT and are being amended upon revision of ASHRAE 90.1  Low for most products.
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	NOPR – 6/00 Final Rule 10/01
Rationale for Priority Level	Final Rule should be published near beginning of FY2002.

## Standards

**Product:** Commercial Furnaces and Boilers

**Priority:** Low

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030</b>	0.5 <sup>5</sup> (ASHRAE Standard 90.1-1999)
<b>Potential Economic Benefits/Burdens</b>	Not available.
<b>Potential Environmental or Energy Security Benefits</b>	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
<b>Status of Required Changes to Test Procedures</b>	DOE plans to publish Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR by June 2001 (furnaces) and July 2001 (boilers).
<b>Other Regulatory Actions</b>	Possible State and regional environmental regulation (e.g. air quality).
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	None known.
<b>Issues</b>	Revised ASHRAE 90.1 standards approved 6/99.
<b>FY 2001 Priority</b>	High

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	Notice of Availability 5/00. Final Rule published 01/12/01
<b>Rationale for Priority Level</b>	Standards set by EPACT were amended to adopt revised ASHRAE 90.1. No further action.

<sup>5</sup> Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

## Standards

**Product:** Commercial Oil and Gas-Fired Packaged Boilers

**Priority:** Medium

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	0.12 – 0.60 <sup>6</sup> (in addition to savings due to ASHRAE Standard 90.1-1999)
Potential Economic Benefits/Burdens	0.2 (estimated NPV, billions of \$1998)
Potential Environmental or Energy Security Benefits	Carbon emissions reduction – est. 4 million tons.
Status of Required Changes to Test Procedures	DOE plans to publish Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR by July 2001.
Other Regulatory Actions	Possible State and regional environmental regulation (e.g. air quality).
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved 6/99, which would save an estimated 0.06 quads from 2001-2030. DOE will consider higher standards for additional energy savings.
FY 2001 Priority	N/A

### Proposed Schedule and Rationale

Proposed Schedule	DOE plans to initiate work in support of rulemaking
Rationale for Priority Level	Energy savings are significant.

<sup>6</sup>Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

## **Test Procedure**

**Product:** Commercial Oil and Gas-Fired Packaged Boilers

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Standards set by EPACT are being amended upon revision of ASHRAE 90.1  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	NOPR - 8/00 Final Rule 9/01
Rationale for Priority Level	Final rule should be published before FY2002.

## **Test Procedure**

**Product:** Commercial Furnaces

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Standards set by EPACT are being amended upon revision of ASHRAE 90.1  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	NOPR - 12/99 Final Rule - 9/01
Rationale for Priority Level	Final rule should be published before FY2002.



## Standards

**Product:** Commercial Water Heaters

**Priority:** Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	0.07 <sup>7</sup> (ASHRAE Standard 90.1-1999)
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	DOE plans to publish the Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR in September 2001.
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved 6/99.
FY 2001 Priority	High

### Proposed Schedule and Rationale

Proposed Schedule	Notice of Availability 5/00. Final Rule 1/01
Rationale for Priority Level	Standards set by EPACT and are being amended to adopt revised ASHRAE 90.1

<sup>7</sup>Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

## **Test Procedure**

**Product:** Commercial Water Heaters

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Standards set by EPACT and will be amended upon revision of ASHRAE 90.1  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	NOPR – 6/00 Final Rule - 09/01
Rationale for Priority Level	Final rule should be published before FY2002.

## Standards

**Product:** Cooking Products - Gas & Electric Ovens, Cook Tops, and Microwave Ovens

**Priority:** Low

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2000-2030</b>	Total ranges considered (Gas only): <sup>8</sup> Ovens [0.1 - 2.1] Cook Tops [0 - 0.5]
<b>Potential Economic Benefits/Burdens</b>	[(9.3) - 0.1] [(4.0) - 0.02] NPV, billions of 1990\$ @ 7%
<b>Potential Environmental or Energy Security Benefits</b>	NOx [11 - 239] NOx [ 0 - 65 ] CO <sub>2</sub> [6 - 133] CO <sub>2</sub> [ 0 - 36 ] Emission reductions in (kt) for NOx, and (Mt) for CO <sub>2</sub> .
<b>Status of Required Changes to Test Procedures</b>	
<b>Other Regulatory Actions</b>	DOE regulation of white goods for full line manufacturers.
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	None known.
<b>Issues</b>	Pilotless designs may require installation of an electrical outlet. Loss of consumer utility if loss of electrical power. If a loss of electricity, cannot use oven.
<b>FY 2000 Priority</b>	High (Gas); Low (Electric)

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	Final Rule - TBD
<b>Rationale for Priority Level</b>	Potential energy savings are low to moderate. Analysis too old to use - requires new analysis for rulemaking.

<sup>8</sup> Based on Draft Report, April 1996 and Supplemental Analysis, November 1997.

## **Test Procedure**

**Product:** Cooking Products - Ovens, Cook Tops, and Microwave Ovens

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needed to be changed for standard.  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	Final Rule issued - October 3, 1997
Rationale for Priority Level	

## Standards

**Product:** Direct Heating Equipment (Gas)

**Priority:** Low

Factors for Priority Setting	Assessment			
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1998-2030	Total range considered: [0 - 0.1] <sup>9</sup> Specific examples below: <sup>10</sup>			
	Piezo ignit. (64.8% AFUE)	Piezo ignit. & Derate 20% (66.9% AFUE)	Previous & Induced Draft (78.0% AFUE)	Previous, Condens. & Modulat. Oper. (87.0% AFUE)
	0.1	0	(0.3)	(1.0)
Potential Economic Benefits/Burdens	[(1.4) - 0.1] NPV, Billions of 1990\$ @ 7%			
	0	0.1	(0.6)	(1.4)
Potential Environmental or Energy Security Benefits	SO <sub>2</sub> 0	(7)	(140)	(320)
	NOx 0	(6)	(132)	(301)
	CO <sub>2</sub> 0	(3)	(72)	(165)
	Emission reductions in (kt) for SO <sub>2</sub> and NOx, and (Mt) for CO <sub>2</sub> .			
Status of Required Changes to Test Procedures	Final rule published 5/12/97.			
Other Regulatory Actions	None known that will impact product.			
Recommendations by Interested Parties				
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.			
Issues	Fuel switching. Rural communities use for backup heating during power outages. Utility concern with electronic ignition.			
FY 2001 Priority	Low			

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
<b>Rationale for Priority Level</b>	Interested parties believe this is a low priority product. Potential energy savings are low.

<sup>9</sup> Based on DOE preliminary analysis, June 1995.

<sup>10</sup> Examples shown for design options and AFUE are for gravity wall heaters (27 - 46 kBtu/hr).

## **Test Procedure**

**Product:** Direct Heating Equipment (Gas)

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	Final Rule issued 5/12/97
Rationale for Priority Level	

## Standards

**Product:** Dishwashers

**Priority:** Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads)	0.34 - 0.79 <sup>11</sup>
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Not available.
Status of Required Changes to Test Procedures	Test procedure is being revised to properly reflect energy consumption for new technologies (e.g. adaptive controls) and reduced annual cycles.
Other Regulatory Actions	DOE regulation of white goods for full line manufacturers.
Recommendations by Interested Parties	Some manufacturers believe that updating the dishwasher standard should be given a low priority.
Evidence of Market-Driven or Voluntary Efficiency Improvements	Energy Savers program. Federal Energy Management Program for procurement initiative. At least two U.S. manufacturers are marketing adaptive control dishwashers.
Issues	Increased efficiency may impact product utility (e.g. may require pre-rinsing of dishes or cleaning of filters) or the availability of affordable models (contract housing).
FY 2001 Priority	Low

### Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Estimated potential energy savings are moderate.

<sup>11</sup> Based on DOE preliminary analysis, June 2001<sup>1</sup>

## **Test Procedure**

**Product:** Dishwashers

**Priority:** High

<b>Factors for Priority Setting</b>	<b>Assessment</b>
<b>Relationship to Changes in Standard</b>	Test Procedure needed to be changed for standard.
<b>Priority of Standard</b>	Low
<b>International or Other Coordinating Activities</b>	Efforts underway to harmonize international test procedures should include dishwashers.
<b>Recommendation by Interested Parties</b>	Manufacturers support a test procedure revision for more accurate testing of new adaptive control models. Industry working on revising its test procedure suggestions to encompass the variety of sensor techniques now in the market.
<b>Statutory Deadline</b>	
<b>Issues</b>	New technology in product, i.e. smart controls, fuzzy logic.

### **Proposed Schedule and Rationale:**

<b>Proposed Schedule</b>	NOPR - published 9/99 Reopening Notice - 7/00 Final Rule -01/02
<b>Rationale for Priority Level</b>	New technology in product, i.e. smart controls, fuzzy logic.



## Standards

**Product:** Distribution Transformers

**Priority:** High

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030</b>	[.39-10.7] <sup>12</sup>
<b>Potential Economic Benefits/Burdens</b>	Not available.
<b>Potential Environmental or Energy Security Benefits</b>	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
<b>Status of Required Changes to Test Procedures</b>	Need to publish a test procedure before rule.
<b>Other Regulatory Actions</b>	None known.
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	EPA Energy Star program for liquid immersion transformers. NEMA's TP-1 and the National Business Awareness Campaign to promote energy efficient electrical products.
<b>Issues</b>	Most efficient designs include proprietary technology. NEMA recommends adoption of voluntary standards as specified in TP-1. Energy savings questioned by NEMA.
<b>FY 2001 Priority</b>	High

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE plans to begin actively pursuing standards rulemaking in 2001.
<b>Rationale for Priority Level</b>	Potential for significant energy savings.

<sup>12</sup> Based on DOE determination notice, October 22, 1997.

## **Test Procedure**

**Product:** Distribution Transformers

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needs to be established for standard.
Priority of Standard	
International or Other Coordinating Activities	High
Recommendation by Interested Parties	NEMA recommends using NEMA TP-2 test standard.
Statutory Deadline	
Issues	Sampling Plan; Definitions of Covered Products

### **Proposed Schedule and Rationale:**

Proposed Schedule	NOPR - published 11/12/98 Reopening Notice 6/99 Final Rule - 8/00
Rationale for Priority Level	Test procedure should be completed during FY 2000.

## Standards

**Product:** Electric Motors, 1 - 200 HP

**Priority:** Low

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads)</b>	Estimate 31.3 billion KW/yr could be saved through enforcement of EPCA efficiency standards for electric motors – enough electricity to meet the lighting needs of all U.S. households for 4 months.
<b>Potential Economic Benefits/Burdens</b>	Not Available.
<b>Potential Environmental or Energy Security Benefits</b>	Not Available.
<b>Status of Required Changes to Test Procedures</b>	Final rule for test procedures published 10/5/99.
<b>Other Regulatory Actions</b>	None known that will impact product.
<b>Recommendations by Interested Parties</b>	Enforcement
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	ASHRAE 90.1. A Consortium for Energy Efficiency@program with utilities. Motor Challenge. Motor Master+
<b>Issues</b>	DOE regulates system efficiencies (e.g. HVAC) where motors are components of such systems.
<b>FY 2001 Priority</b>	Low

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE does not plan to actively pursue rulemaking in the next two years. Work would be limited to basic technology investigation and monitoring of voluntary programs.
<b>Rationale for Priority Level</b>	Interested Parties believe this is a low priority product. Potential energy savings are unknown at this time. Determination required by EPCA

## **Test Procedure**

**Product:** Electric Motors, 1 - 200 HP

**Priority:** Low

Factors for Priority Setting	Assessment
<b>Relationship to Changes in Standard</b>	Test Procedure needed to be revised to support the standard
<b>Priority of Standard</b>	Low
<b>International or Other Coordinating Activities</b>	Natural Resources Canada: Energy Efficiency Regulations for Electric Motors International Electrotechnical Commission/International Standards Organisation (IEC/ISO)
<b>Recommendation by Interested Parties</b>	Manufacturers and energy efficiency advocates support test procedure rulemaking.
<b>Statutory Deadline</b>	
<b>Issues</b>	Expect DOE test procedure to be revised for compatibility with global (IEC/ISO) test procedure.

### **Proposed Schedule and Rationale:**

<b>Proposed Schedule</b>	Proposed Rule Issued - 11/27/97 Final Rule – 10/5/99
<b>Rationale for Priority Level</b>	Final Rule recently published .

## Standards

**Product:** Fluorescent Lamp Ballasts

**Priority:** Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2000-2030	1.2 – 2.3
Potential Economic Benefits/Burdens	1.4 – 2.6 NPV, billions of 1997\$ @ 7%
Potential Environmental or Energy Security Benefits	
Status of Required Changes to Test Procedures	None required.
Other Regulatory Actions	Some ballast manufacturers also make electric motors.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	EPA Green Lights and Energy Star buildings, ASHRAE 90.1, DOE's Federal Relighting Initiative (FEMP), The Energy Cost Savings Council, and some utility DSM programs.
Issues	Standards, for electronic ballasts, may adversely affect U.S. manufacturers. Impact on U.S. employment levels.
FY 2001 Priority	Low

### Proposed Schedule and Rationale

Proposed Schedule	NOPR – 3/00 Final Rule - 9/00
Rationale for Priority Level	Final Rule in FY2000.

## **Test Procedure**

**Product:** Fluorescent Lamp Ballasts

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Efficiency levels for new standards are already in the market and are covered by existing standards and test procedures. Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	
Rationale for Priority Level	

## Standards Determination

**Product:** High Intensity Discharge (HID) Lamps

**Priority:** Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	[0.11-0.22] <sup>13</sup>
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	IES and ANSI procedures are in place.
Other Regulatory Actions	Issues with definitions, covered products and sampling.
Recommendations by Interested Parties	EPA mercury disposal requirements may apply.
Evidence of Market-Driven or Voluntary Efficiency Improvements	Mercury vapor lamps being replaced by metal halide and high pressure sodium lamps.
Issues	Concern about non-equitable impact of possible elimination of mercury vapor lamps (e.g. significant regional and municipal variation exists). High first cost impact (elimination of mercury vapor lamps will require fixture replacement).
FY 2001 Priority	Low

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE does not plan to actively pursue rulemaking in the next year.
<b>Rationale for Priority Level</b>	Potential energy savings are low.

<sup>13</sup> Based on DOE rough estimate, May 1996.

## **Test Procedure**

**Product:** High Intensity Discharge (HID) Lamp

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure needs to be developed for standard.  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	No work expected during FY2001.
Rationale for Priority Level	



## Standards

**Product:** Lamps, Fluorescent and Incandescent

**Priority:** Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads)	Not Available.
Potential Economic Benefits/Burdens	Not Available.
Potential Environmental or Energy Security Benefits	Not Available.
Status of Required Changes to Test Procedures	IES and ANSI procedures are in place, DOE test procedure Final Rule issued 5/29/97
Other Regulatory Actions	Existing EPA mercury disposal requirements apply, but EPA issued a final rule July 6, 1999, including lamps as Universal Hazardous Waste.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	EPA Green lights, Energy Star Buildings, ASHRAE 90.1, and some utility DSM programs, FEMP.
Issues	Because lamps are components of systems, establishment of standards is more difficult.
FY 2001 Priority	Low

### Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Interested Parties believe this is a low priority product. Potential energy savings are unknown at this time. Statutory deadline is 1997 (2002) for amending current lamp standards and 1999 for adding additional general service fluorescent and incandescent lamps.

## **Test Procedure**

**Product:** Lamps, Fluorescent and Incandescent

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	Final Rule issued 5/29/97
Rationale for Priority Level	

## Standards

**Product:** Mobile Home Furnaces

**Priority:** Low

Factors for Priority Setting	Assessment			
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1998-2030</b>		Imprv. fan motor & burner box damper		
	Gas	Imprv. fan motor (76.6% AFUE)	(79.6 AFUE)	Condensing (91.7 AFUE)
	Oil	Imprv. fan motor (82.1% AFUE)	Imprv. fan motor (82.1% AFUE)	Imprv. fan motor, ht. exchgr., condens. & full modulation (93.7% AFUE)
		0.1	0.1	0.5
Total range considered: [ 0.1 - 0.6 ] <sup>14</sup> Specific examples below:				
<b>Potential Economic Benefits/Burdens</b>	[ (0.8) - 0.1 ] NPV, Billions of 1990\$ @ 7%			
	0.1	0.1		(0.2)
<b>Potential Environmental or Energy Security Benefits</b>	SO <sub>2</sub>	16	17	4
	NO <sub>x</sub>	15	16	4
	CO <sub>2</sub>	9	9	2
	Emission reductions in (kt) for SO <sub>2</sub> and NO <sub>x</sub> , and (Mt) for CO <sub>2</sub> .			
<b>Status of Required Changes to Test Procedures</b>	Final rule issued 5/12/97.			
<b>Other Regulatory Actions</b>	None known that will impact product.			
<b>Recommendations by Interested Parties</b>				
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	None known.			
<b>Issues</b>	Fuel switching. Limited space for installation.			
<b>FY 2001 Priority</b>	Low			

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
<b>Rationale for Priority Level</b>	Potential energy savings are low to moderate. Higher standards levels requiring technologies, such as condensing furnaces would impact utility to consumers.

<sup>14</sup> Based on DOE preliminary analysis, June 1995.

## **Test Procedure**

**Product:** Mobile Home Furnaces

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	Final rule issued 5/12/97.
Rationale for Priority Level	

## Standards

**Product:** Packaged Terminal Air Conditioners and Heat Pumps

**Priority:** High

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030</b>	0.55 – 0.78 <sup>15</sup> (in addition to savings due to ASHRAE Standard 90.1-1999)
<b>Potential Economic Benefits/Burdens</b>	0.6 (estimated NPV, billions of \$1998).
<b>Potential Environmental or Energy Security Benefits</b>	Specific estimates of emission reductions have not been developed however, energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
<b>Status of Required Changes to Test Procedures</b>	DOE plans to publish Final Rules to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR by September 2001.
<b>Other Regulatory Actions</b>	EPA phase out of HCFC refrigerants.
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	None known.
<b>Issues</b>	Revised ASHRAE 90.1 standards approved 6/99, which would save an estimated 0.11 quads from 2001-2030. DOE will consider higher standards for additional energy savings.
<b>FY 2001 Priority</b>	N/A

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE plans to initiate rulemaking in FY2001.
<b>Rationale for Priority Level</b>	Energy savings are significant.

<sup>15</sup> Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

## Standards

**Product:** Plumbing Fixtures/Fittings

**Priority:** Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads)	The Department has not conducted any recent analysis regarding potential energy savings for this product.
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Not available.
Status of Required Changes to Test Procedures	
Other Regulatory Actions	None.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	As flow rates and water consumption decline the effects on utility need to be carefully considered.
FY 2001 Priority	Low

### Proposed Schedule and Rationale

Proposed Schedule	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
Rationale for Priority Level	Dependent upon revision by ASME and approval by ANSI to ASME/ANSI A112.18.1 and ASME/ANSI A112.19.6.

## **Test Procedure**

**Product:** Plumbing Fixtures/Fittings

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	Final Rule - March 18, 1998
Rationale for Priority Level	

## Standards

**Product:** Pool Heaters (Gas)

**Priority:** Low

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2000-2030</b>	Total range considered: [0.2 - 0.9] <sup>16</sup> Specific examples below: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <span>IID, (78% E<sub>T</sub>)</span> <span>Non-condensing limit, (82.2% E<sub>T</sub>)</span> <span>Condensing, (90.8% E<sub>T</sub>)</span> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>0.2</span> <span>0.4</span> <span>0.7</span> </div>
<b>Potential Economic Benefits/Burdens</b>	[ (1.4) - 0.2 ] NPV, Billions of 1990\$ @ 7% <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>0.2</span> <span>0.2</span> <span>(0.6)</span> </div>
<b>Potential Environmental or Energy Security Benefits</b>	<div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>SO<sub>2</sub></span> <span>0</span> <span>0</span> <span>0</span> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>NOx</span> <span>42</span> <span>42</span> <span>42</span> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>CO<sub>2</sub></span> <span>11</span> <span>18</span> <span>35</span> </div> <p>Emission reductions in (kt) for SO<sub>2</sub> and NOx, and (Mt) for CO<sub>2</sub>.</p>
<b>Status of Required Changes to Test Procedures</b>	Final rule issued 5/12/97.
<b>Other Regulatory Actions</b>	None known that will impact product.
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	None known.
<b>Issues</b>	
<b>FY 2001 Priority</b>	Low

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE does not plan to actively pursue rulemaking in the next year. Work would be limited to basic technology investigation and monitoring of voluntary programs.
<b>Rationale for Priority Level</b>	Interested Parties believe this is a low priority product. Potential energy savings are low.

<sup>16</sup> Based on DOE preliminary analysis, June 1995



## **Test Procedure**

**Product:** Pool Heaters (Gas)

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard.  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	Final rule issued 5/12/97.
Rationale for Priority Level	

## Standards

**Product:** Refrigerators, Refrigerator/Freezers, & Freezers

**Priority:** Low

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1998-2030</b>	The Department has not conducted any recent analysis regarding potential energy savings for this product.
<b>Potential Economic Benefits/Burdens</b>	Not available
<b>Potential Environmental or Energy Security Benefits</b>	Not available
<b>Status of Required Changes to Test Procedures</b>	No changes required for standards.
<b>Other Regulatory Actions</b>	EPA phase out of insulation HCFCs in 2003. DOE regulation of white goods for full line manufacturers.
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	Super Efficient Refrigerator Program (Golden Carrot). New York Housing Authority mass procurement. Energy Savers program. Significant quantities of new high efficiency models are being marketed.
<b>Issues</b>	Final Rule Issued - April 28, 1997.
<b>FY 2001 Priority</b>	Low

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	Final Rule Issued - April 28, 1997
<b>Rationale for Priority Level</b>	Rule issued, will be effective July 1, 2001

## **Test Procedure**

**Product:** Refrigerators, Refrigerator/Freezers, & Freezers

**Priority:** Medium for compact refrigerators and refrigerator/freezers, Low for all others.

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard.  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	Tests at NIST have revealed deficiencies in the compact refrigerator test procedure. These will be researched and corrected, probably by revising the test procedure for compact refrigerators.

### **Proposed Schedule and Rationale:**

Proposed Schedule	NIST tested compact refrigerators, and proposed a modification of the compact refrigerator test procedure. A rulemaking to modify the test procedure will begin in 2002.
Rationale for Priority Level	Compact refrigerator manufacturers have obtained inconsistent results when testing each other's products. Deficiencies in test procedure have been identified.

## Standards

**Product:** Residential Central Air Conditioners & Heat Pumps

**Priority:** High - drops to Low priority upon completion

Factors for Priority Setting	Assessment
<b>Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030</b>	Total range considered: [2.2 – 10.4] <sup>17</sup> Specific examples below: <div style="display: flex; justify-content: space-around;"> <div><u>11 SEER</u> 2.2</div> <div><u>12 SEER</u> 3.8</div> <div><u>13 SEER</u> 5.4</div> <div><u>18 SEER</u> 10.4</div> </div>
<b>Potential Economic Benefits/Burdens</b>	[(22) - 0] NPV, Billions of 1998\$ @ 7% <div style="display: flex; justify-content: space-around;"> <div>0</div> <div>(1)</div> <div>(5)</div> <div>(22)</div> </div>
<b>Potential Environmental or Energy Security Benefits</b>	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
<b>Status of Required Changes to Test Procedures</b>	Changes are not required for standards.
<b>Other Regulatory Actions</b>	EPA phase out of HCFC-22 refrigerant - 2010 DOE regulation of furnaces.
<b>Recommendations by Interested Parties</b>	
<b>Evidence of Market-Driven or Voluntary Efficiency Improvements</b>	Energy Star program recommending a 12 SEER.
<b>Issues</b>	Small manufacturers. Niche Products. Regional variation.
<b>FY 2001 Priority</b>	High

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	SANOPR - 11/99 NOPR - 8/00 Final Rule – 1/01 - quashed - new proposed rule published July 25, 2001.
<b>Rationale for Priority Level</b>	Potential energy savings are large.

<sup>17</sup> Based on DOE analysis for NOPR, see [www.eren.doe.gov/buildings/codes\\_standards/index.htm](http://www.eren.doe.gov/buildings/codes_standards/index.htm).

## Test Procedure

**Product:** Residential Central Air Conditioners & Heat Pumps

**Priority:** High

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure does not need to be changed for standard.
Priority of Standard	
International or Other Coordinating Activities	High
Recommendation by Interested Parties	Would like to see it published.
Statutory Deadline	
Issues	Many changes to accommodate new technology. ARI has submitted data for and developed new default cyclic degradation coefficients.

### Proposed Schedule and Rationale:

Proposed Schedule	NOPR - 1/01 Final Rule - 3/02
Rationale for Priority Level	Test procedure revision long overdue.

## **Test Procedure**

**Product:** Residential Central Air Conditioners & Heat Pumps – Ductless Split Systems

**Priority:** Medium

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure does not need to be changed for standard.
Priority of Standard	
International or Other Coordinating Activities	High
Recommendation by Interested Parties	Ductless split system manufacturers would prefer to use calorimeter test.
Statutory Deadline	
Issues	Calorimeter test (which is used for room air conditioners) is more suitable and accurate for testing ductless split central air conditioners, but this test is not currently in the DOE central air conditioning test procedure.

### **Proposed Schedule and Rationale:**

Proposed Schedule	DOE plans to initiate work in support of rulemaking
Rationale for Priority Level	Change would make test procedure more accurate for this product.

## Standards

**Product:** Residential Furnaces & Boilers

**Priority:** High

Factors for Priority Setting	Assessment			
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2000-2030	Total range considered: [0.6 - 10.2] <sup>18</sup> Specific examples below:			
	Gas Furnaces	Insul., IID, imprv. fan motor, & two stage oper. (81.8% AFUE)	Previous & condensing (92% AFUE)	Gas absorption heat pump
	Gas Boilers	IID (81.8% AFUE)	IID & pulse condensing (90.4%)	Gas absorption heat pump
		0.6	3.7	10.2
Potential Economic Benefits/Burdens	Not available.			
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are more significant than other products.			
Status of Required Changes to Test Procedures	Final rule issued 5/12/97			
Other Regulatory Actions	Possible State and regional environmental regulation. DOE regulation of central air conditioning products. Consumer Product Safety Commission - possible regulation.			
Recommendations by Interested Parties				
Evidence of Market-Driven or Voluntary Efficiency Improvements	Energy Star program. Wisconsin state condensing furnace/boiler program. ACEEE indicated that trend for higher efficiency products stopped in 1994.			
Issues				
FY 2001 Priority	Low			

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE plans to initiate rulemaking in 2001.
<b>Rationale for Priority Level</b>	Potential energy savings are significant. Higher standards levels requiring technologies such as condensing furnaces would impact utility to consumers.

<sup>18</sup> Based on DOE rough estimate for gas only, May 1996.

## **Test Procedure**

**Product:** Residential Furnaces & Boilers

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard  High
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	Final rule issued 5/12/97
Rationale for Priority Level	



## Standards

**Product:** Residential Water Heaters - Gas, Oil & Electric

**Priority:** Low

Factors for Priority Setting	Assessment						
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2003-2030	Total ranges considered: 3.4 – 13.1 <sup>19</sup>						
	Electric	Heat Traps & Insul. Tank Bottom	Heat Traps, 2.5" Insul. & Insul. Tank Bottom	Ht. Traps, 3" Insul. & Plastic Tank			
	Gas	2" Insul., Heat Traps, Flue Baffle	2.5" Insul., Heat Traps, Flue Baffle	3" Insul., Sidearm w/ 80% Flue Baffle & IID			
	Quads at source	3.4	4.8	13.1			
	NPV, 1998\$	2.3	3.3	-17.4			
	SO <sub>2</sub> (kt)	4	-6	54			
	NO <sub>x</sub> (kt)	141	229	599			
	CO <sub>2</sub> (Mt)	48	83	219			
	The Final Rule energy savings was 4.6 quads over 2004-2030.						
Potential Economic Benefits/Burdens	The Net Present Value (NPV) is \$2.0 billion cumulative from 2004 to 2030 in 1997 dollars.						
Potential Environmental or Energy Security Benefits	For period 2004- 2030, 152 million metric tons of carbon and 273 thousand metric tons of NO <sub>x</sub> .						
Status of Required Changes to Test Procedures	Changes not required for standards. Final rule for test procedure was published in 1998.						
Other Regulatory Actions	EPA phase out of HCFCs for insulation (2003). Consumer Product Safety Commission initiative for prevention of ignition of flammable vapors by gas water heaters.						
Recommendations by Interested Parties							
Evidence of Market-Driven or Voluntary Efficiency Improvements	Demand-side management programs for high efficiency water heaters.						
Issues	Electronic ignition has impact on customer utility. Fuel switching. Replacement blowing agent for insulation. Installation in small spaces.						
FY 2001 Priority	High						

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	NOPR – 4/00 Final Rule - 1/01 No
<b>Rationale for Priority Level</b>	Final Rule published 1/17/2001.

<sup>19</sup> Based on DOE analysis May 1999. Energy savings reduced due to phase out of HCFC-141b insulation blowing agent in 2003.

## **Test Procedure**

**Product:** Residential Water Heaters - Gas, Oil & Electric

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	No change needed
Priority of Standard	High
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	
Rationale for Priority Level	Test procedure published in May 1998.

## Standards

**Product:** Room Air Conditioners

**Priority:** Low

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 2000 -2030	The Department has not conducted any recent analysis regarding potential energy savings for this product.
Potential Economic Benefits/Burdens	Not available
Potential Environmental or Energy Security Benefits	Not available
Status of Required Changes to Test Procedures	Not required for standards.
Other Regulatory Actions	EPA phase out of HCFC-22 refrigerant.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	DSM programs. Labeling program very effective.
Issues	Final Rule Issued - September 24, 1997
FY 2001 Priority	Low

### Proposed Schedule and Rationale

Proposed Schedule	Final Rule Issued - September 24, 1997
Rationale for Priority Level	

## **Test Procedure**

**Product:** Room Air Conditioners

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard	Test Procedure not needed to be changed for standard  Low
Priority of Standard	
International or Other Coordinating Activities	
Recommendation by Interested Parties	
Statutory Deadline	
Issues	

### **Proposed Schedule and Rationale:**

Proposed Schedule	
Rationale for Priority Level	

## Standards

**Product:** Tankless Gas-Fired Instantaneous Water Heaters

**Priority:** Medium

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1995-2030	0.10 <sup>20</sup> (ASHRAE Standard 90.1-1999)
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	DOE plans to publish the Final Rule to incorporate the test procedures referred to in ASHRAE Standard 90.1 into the CFR in September 2001.
Other Regulatory Actions	
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	Revised ASHRAE 90.1 standards approved 6/99.
FY 2001 Priority	High

### Proposed Schedule and Rationale

Proposed Schedule	Notice of Availability 5/00. Final Rule 5/02
Rationale for Priority Level	Standards set by EPACT and are being amended to adopt revised ASHRAE 90.1

<sup>20</sup> Based on Screening Analysis Report for Commercial HVAC Standards, see 65 FR 30929.

## Standards Determination

**Product:** Small Electric Motors

**Priority:** High

Factors for Priority Setting	Assessment
Potential Energy Savings from Regulatory Action; Cumulative (Quads) 1998-2030	[0.8-4.5] <sup>21</sup>
Potential Economic Benefits/Burdens	Not available.
Potential Environmental or Energy Security Benefits	Specific estimates of emission reductions have not been developed however, estimated energy savings indicated above are indicative of the comparative emission benefits that are likely to be possible. Expected oil savings are minimal.
Status of Required Changes to Test Procedures	IEEE 114 test procedure for single-phase induction motors is under review.
Other Regulatory Actions	Small motors used in NAECA "covered products" (e.g. white goods) are exempt.
Recommendations by Interested Parties	
Evidence of Market-Driven or Voluntary Efficiency Improvements	None known.
Issues	None.
FY 2001 Priority	Medium

### Proposed Schedule and Rationale

<b>Proposed Schedule</b>	DOE plans to initiate determination in FY2002.
<b>Rationale for Priority Level</b>	Potential energy savings are significant. Determination required by EPCA.

<sup>21</sup> Based on draft DOE report, May 1996.

## **Test Procedure**

**Product:** Small Electric Motors

**Priority:** Low

Factors for Priority Setting	Assessment
Relationship to Changes in Standard Priority of Standard International or Other Coordinating Activities Recommendation by Interested Parties Statutory Deadline Issues	High

### **Proposed Schedule and Rationale:**

Proposed Schedule	Dependent on Determination.
Rationale for Priority Level	